

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/551, 699
Source: PCT
Date Processed by STIC: 10/14/2005

ENTERED



PCT

RAW SEQUENCE LISTING

DATE: 10/14/2005

PATENT APPLICATION: US/10/551,699

TIME: 13:27:41

Input Set : A:\CD054PCT.ST25.txt

Output Set: N:\CRF4\10142005\J551699.raw

```

3 <110> APPLICANT: CropDesign N.V.
5 <120> TITLE OF INVENTION: Plant haemoglobin
7 <130> FILE REFERENCE: CD-054-PCT
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/551,699
C--> 9 <141> CURRENT FILING DATE: 2005-09-30
9 <150> PRIOR APPLICATION NUMBER: EP 03075974.0
10 <151> PRIOR FILING DATE: 2003-04-01
12 <160> NUMBER OF SEQ ID NOS: 12
14 <170> SOFTWARE: PatentIn version 3.1
16 <210> SEQ ID NO: 1
17 <211> LENGTH: 860
18 <212> TYPE: DNA
19 <213> ORGANISM: Beta vulgaris
21 <400> SEQUENCE: 1
22 tacaaccac aaatttaagc tattaatata ctttctctgt cattttttgt tgttccaatt      60
24 tagtttcttt tcttttaaat taaaacaaaa ctatgacttt tacagagaaa gatgaagctt      120
26 tggtaaaaga atcatgggat ataatgaagc aaaatatccc agaatacagc cttcggtttt      180
28 tctccataat attggaaatt gctccagcag ccaaaaatat gttctcattt ttaagggatt      240
30 cagaggaagt tccacagaat aatcccaagc tgaaagctca tgcaatcaag gtttttaaaa      300
32 tgacatgtga atcagccatt caacttcgag aaaaagggtga agtggttgta ggagagacta      360
34 cccttaaata tttgggagct atccatttga agaatggagt gattgatccc cattttgagg      420
36 ttgtgaaaca agcattattg agaaccatag aagaagcaag tggtgacaaa tggagtgaag      480
38 aattgaaatg tgcttgaggt gttgcctatg atcacttagc tgcagccatc aaagctgaga      540
40 tgaaggaata ggtagcttag ttctcagtcg ccaaaagtat tactctaaaa atattgaata      600
42 aatattctta ttgtttttga ggggaaatta ttgttattgt tgattctgac tcacttattt      660
44 atccgagtga cttgatattg tgctttttct tgccttatta ttgattagca agaaggaat      720
46 caaattcata attattgggt taacctgta atagtgcata ttaattgtga taaaaccttg      780
48 gtgatatatg taccttattg caaatttaaa ataatttcc ctcggtcttt catttttaaa      840
50 aaaaaaaaaa aaaaaaaaaa
53 <210> SEQ ID NO: 2
54 <211> LENGTH: 152
55 <212> TYPE: PRT
56 <213> ORGANISM: Beta vulgaris
58 <400> SEQUENCE: 2
60 Met Thr Phe Thr Glu Lys Asp Glu Ala Leu Val Lys Glu Ser Trp Asp
61 1          5          10          15
64 Ile Met Lys Gln Asn Ile Pro Glu Tyr Ser Leu Arg Phe Phe Ser Ile
65          20          25          30
68 Ile Leu Glu Ile Ala Pro Ala Ala Lys Asn Met Phe Ser Phe Leu Arg
69          35          40          45
72 Asp Ser Glu Glu Val Pro Gln Asn Asn Pro Lys Leu Lys Ala His Ala
73          50          55          60
76 Ile Lys Val Phe Lys Met Thr Cys Glu Ser Ala Ile Gln Leu Arg Glu

```

RAW SEQUENCE LISTING

DATE: 10/14/2005

PATENT APPLICATION: US/10/551,699

TIME: 13:27:41

Input Set : A:\CD054PCT.ST25.txt

Output Set: N:\CRF4\10142005\J551699.raw

```

77 65          70          75          80
80 Lys Gly Glu Val Val Val Gly Glu Thr Thr Leu Lys Tyr Leu Gly Ala
81          85          90          95
84 Ile His Leu Lys Asn Gly Val Ile Asp Pro His Phe Glu Val Val Lys
85          100          105          110
88 Gln Ala Leu Leu Arg Thr Ile Glu Glu Ala Ser Gly Asp Lys Trp Ser
89          115          120          125
92 Glu Glu Leu Lys Cys Ala Trp Ser Val Ala Tyr Asp His Leu Ala Ala
93          130          135          140
96 Ala Ile Lys Ala Glu Met Lys Glu
97 145          150
100 <210> SEQ ID NO: 3
101 <211> LENGTH: 858
102 <212> TYPE: DNA
103 <213> ORGANISM: Arabidopsis thaliana
105 <400> SEQUENCE: 3
106 attgaatacc atatatatat agatacacag acatataaac acacaaatat tcgtgttttt 60
108 ttcaaactgt gagagaaaaa gaaagagaga aagagatggg agagattggg ttacagaga 120
110 agcaagaagc tttggtgaag gaatcgtggg agatactgaa acaagacatc cccaaataca 180
112 gccttcactt cttctcacag atactggaga tagcaccagc agcaaaaggc ttgttctctt 240
114 tcctaagaga ctcatgatgaa gtccctcaca acaatcctaa actcaaagct catgctgtta 300
116 aagtcttcaa gatgacatgt gaaacagcta tacagctgag ggaggaagga aaggtggtag 360
118 tggtgacac aaccctccaa tatttaggct caattcatct caaaagcggc gttattgacc 420
120 ctcaacttga ggtggtgaaa gaagctttgc taaggacatt gaaagagggg ttgggggaga 480
122 aatacaatga agaagtggaa ggtgcttggt ctcaagctta tgatcacttg gctttagcca 540
124 tcaagaccga gatgaaacaa gaagagtcac aaaaccctat tgatcatttg ggtatcgcat 600
126 acatgaatct attccacata catgatacac atatacgtgt ttctgtgtgt gtactatgtt 660
128 gctctctgac tttctacagt tcactatattt aattataaag aaggatcttg tgctatcatt 720
130 agggagatac gtgatactgt agttcttctt gaaattgtta ttcgtgagaa atatcatggt 780
132 ttgaagtatt tattttcaca agatggatgt taacgtgggg atcattttac aatcattcta 840
134 caaataattt tacttctc
137 <210> SEQ ID NO: 4
138 <211> LENGTH: 158
139 <212> TYPE: PRT
140 <213> ORGANISM: Arabidopsis thaliana
142 <400> SEQUENCE: 4
144 Met Gly Glu Ile Gly Phe Thr Glu Lys Gln Glu Ala Leu Val Lys Glu
145 1          5          10          15
148 Ser Trp Glu Ile Leu Lys Gln Asp Ile Pro Lys Tyr Ser Leu His Phe
149          20          25          30
152 Phe Ser Gln Ile Leu Glu Ile Ala Pro Ala Ala Lys Gly Leu Phe Ser
153          35          40          45
156 Phe Leu Arg Asp Ser Asp Glu Val Pro His Asn Asn Pro Lys Leu Lys
157          50          55          60
160 Ala His Ala Val Lys Val Phe Lys Met Thr Cys Glu Thr Ala Ile Gln
161 65          70          75          80
164 Leu Arg Glu Glu Gly Lys Val Val Val Ala Asp Thr Thr Leu Gln Tyr
165          85          90          95
168 Leu Gly Ser Ile His Leu Lys Ser Gly Val Ile Asp Pro His Phe Glu

```

RAW SEQUENCE LISTING

DATE: 10/14/2005

PATENT APPLICATION: US/10/551,699

TIME: 13:27:41

Input Set : A:\CD054PCT.ST25.txt

Output Set: N:\CRF4\10142005\J551699.raw

```

169          100          105          110
172 Val Val Lys Glu Ala Leu Leu Arg Thr Leu Lys Glu Gly Leu Gly Glu
173          115          120          125
176 Lys Tyr Asn Glu Glu Val Glu Gly Ala Trp Ser Gln Ala Tyr Asp His
177          130          135          140
180 Leu Ala Leu Ala Ile Lys Thr Glu Met Lys Gln Glu Glu Ser
181 145          150          155
184 <210> SEQ ID NO: 5
185 <211> LENGTH: 486
186 <212> TYPE: DNA
187 <213> ORGANISM: Brassica napus
189 <400> SEQUENCE: 5
190 atgggagaga ttgtgtttac ggagaagcaa gaagcttttg tgaaggagtc ttgggagata      60
192 ctaaagcaag atatcccca atacagtctt cacttcttct cacagatact ggagatagca      120
194 ccagcagcaa aggacatggt ctctttccta agagacacag atgaagtccc tcataacaat      180
196 cctaaactca aagctcatgc tgttaaagtc ttcaagatga catgtgagac agcaatacag      240
198 ctgagggaga aaggaaaggt agtggtggct gacacaaccc tccaatactt gggctctgtt      300
200 catttcaaga gcggtgttct tgatcctcac ttgaggtgg tgaaagaggc attggtgagg      360
202 acactgaaag aagggttggg ggagaagtac aatgaagaag tggaaggagc ttggtccaag      420
204 gcttatgatc acttggttt agccattaag gccgagatga aacaagaaga ctcacaaaaa      480
206 ccctaa
209 <210> SEQ ID NO: 6
210 <211> LENGTH: 161
211 <212> TYPE: PRT
212 <213> ORGANISM: Brassica napus
214 <400> SEQUENCE: 6
216 Met Gly Glu Ile Val Phe Thr Glu Lys Gln Glu Ala Leu Val Lys Glu
217 1          5          10          15
220 Ser Trp Glu Ile Leu Lys Gln Asp Ile Pro Lys Tyr Ser Leu His Phe
221          20          25          30
224 Phe Ser Gln Ile Leu Glu Ile Ala Pro Ala Ala Lys Asp Met Phe Ser
225          35          40          45
228 Phe Leu Arg Asp Thr Asp Glu Val Pro His Asn Asn Pro Lys Leu Lys
229          50          55          60
232 Ala His Ala Val Lys Val Phe Lys Met Thr Cys Glu Thr Ala Ile Gln
233 65          70          75          80
236 Leu Arg Glu Lys Gly Lys Val Val Val Ala Asp Thr Thr Leu Gln Tyr
237          85          90          95
240 Leu Gly Ser Val His Phe Lys Ser Gly Val Leu Asp Pro His Phe Glu
241          100          105          110
244 Val Val Lys Glu Ala Leu Val Arg Thr Leu Lys Glu Gly Leu Gly Glu
245          115          120          125
248 Lys Tyr Asn Glu Glu Val Glu Gly Ala Trp Ser Lys Ala Tyr Asp His
249          130          135          140
252 Leu Ala Leu Ala Ile Lys Ala Glu Met Lys Gln Glu Asp Ser Gln Lys
253 145          150          155          160
256 Pro
260 <210> SEQ ID NO: 7
261 <211> LENGTH: 50

```

RAW SEQUENCE LISTING

DATE: 10/14/2005

PATENT APPLICATION: US/10/551,699

TIME: 13:27:41

Input Set : A:\CD054PCT.ST25.txt

Output Set: N:\CRF4\10142005\J551699.raw

```

262 <212> TYPE: DNA
263 <213> ORGANISM: Artificial sequence
265 <220> FEATURE:
266 <223> OTHER INFORMATION: primer prn05458
268 <400> SEQUENCE: 7
269 ggggaccact ttgtacaaga aagctgggtc aaatgatcaa tagggtttta      50
272 <210> SEQ ID NO: 8
273 <211> LENGTH: 57
274 <212> TYPE: DNA
275 <213> ORGANISM: Artificial sequence
277 <220> FEATURE:
278 <223> OTHER INFORMATION: primer prn06122
280 <400> SEQUENCE: 8
281 ggggacaagt ttgtacaaaa aagcaggctt aaacagtgag agaaaaagaa agagaga      57
284 <210> SEQ ID NO: 9
285 <211> LENGTH: 54
286 <212> TYPE: DNA
287 <213> ORGANISM: Artificial sequence
289 <220> FEATURE:
290 <223> OTHER INFORMATION: primer prn05447
292 <400> SEQUENCE: 9
293 ggggacaagt ttgtacaaaa aagcaggctt aaacaatggc tctcgtggag gata      54
296 <210> SEQ ID NO: 10
297 <211> LENGTH: 48
298 <212> TYPE: DNA
299 <213> ORGANISM: Artificial sequence
301 <220> FEATURE:
302 <223> OTHER INFORMATION: primer prn05448
304 <400> SEQUENCE: 10
305 ggggaccact ttgtacaaga aagctgggtg atcatggagg tggagcag      48
308 <210> SEQ ID NO: 11
309 <211> LENGTH: 64
310 <212> TYPE: DNA
311 <213> ORGANISM: Artificial sequence
313 <220> FEATURE:
314 <223> OTHER INFORMATION: primer prn06021
316 <400> SEQUENCE: 11
317 ggggacaagt ttgtacaaaa aagcaggctt aaacaatgac ttttacagag aaagatgaag      60
319 cttt      64
322 <210> SEQ ID NO: 12
323 <211> LENGTH: 56
324 <212> TYPE: DNA
325 <213> ORGANISM: Artificial sequence
327 <220> FEATURE:
328 <223> OTHER INFORMATION: primer prn06022
330 <400> SEQUENCE: 12
331 ggggaccact ttgtacaaga aagctgggtc taagctacct attccttcat ctcage      56

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/551,699

DATE: 10/14/2005

TIME: 13:27:42

Input Set : A:\CD054PCT.ST25.txt

Output Set: N:\CRF4\10142005\J551699.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date